



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/602,639	06/25/2003	Atsushi Minemura	P23877	1056
7055	7590	06/27/2006	EXAMINER	
GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191			BERGER, AUBREY H	
			ART UNIT	PAPER NUMBER
			2134	
DATE MAILED: 06/27/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/602,639		MINEMURA, ATSUSHI	
	Examiner		Art Unit	
	Aubrey H. Berger		2134	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>6/2/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-20 are pending.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

3. The information disclosure statement (IDS) submitted on 2/6/06 is being considered by the examiner.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claim 20 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 20 is directed to a computer program and which not tangibly embodied on an appropriate computer readable medium and therefore does not constitute statutory subject matter.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-20 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. Regarding claim 1, "an information acquirer that acquires their authentication information from outside of the second device", lines 16-18, is unclear.

9. Claims 1, 7, 8, and 20 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements is: how the authentication information generator generates the fourth authentication information from the second and third authentication information.

10. Regarding claim 5, "a device that performs mutual authentication with the first device acquires the fourth authentication information from the second device, and sets the first device for the first authentication information as initial setting," is unclear.

11. Regarding claims 7-8 and 20, "third authentication information provided from outside of the second device," is unclear.

12. Claim 14 recites the limitation "the fourth authentication information" in line 7. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2134

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

14. Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Raith, USPN 5,241,598.

Regarding claims 1-3 and 5, Raith discloses device authentication system in which a first device/radio network or base station (fig. 1, B1-B10 and col. 14, lines 46-50), authenticates a second device/mobile station (fig. 1, M1-M10),

wherein the first device/network, comprises:

a transmission/reception section that transmits and receives information to/from the second device/mobile station, (col. 9, lines 48-50);

a first information holding section that holds first authentication information/changeable key input/RAND (col. 15, lines 59-60), in a secure area (col. 8, lines 6-7); and

a decider/controller, that makes a decision on authentication (col. 8, lines 62-66 and col. 9, lines 48-50),

the second device/mobile station comprises:

a transmission/reception section that transmits and receives information to/from the first device/network;

a second information holding section that holds second authentication information/mobile identification number/MIN (col. 15, lines 64-65), (col. 7, line 64-col. 8, line 3);

an information acquirer that acquires third authentication information/electronic serial number/ESN (col. 16, line 8), from outside of the second device/mobile station; and

an authentication information generator which generates fourth authentication information/temporary encryption key (col. 16, lines 11-12), from the second authentication information/MIN, and the third authentication information/ESN, and outputs the fourth authentication information/key, to the first device/network, through the transmission/reception section, (col. 17, lines 17-20) and the decider/controller, makes a decision on conformity between the first authentication information/RAND, and the fourth authentication information/key, to authenticate the second device/mobile station (col. 16, lines 13-20).

Regarding claim 4, Raith discloses wherein the second authentication information is updated whenever the authentication processing is performed, and according to update of the second authentication information, the first authentication information held in the first information holding section in the first device is updated (col. 15, line 57-col. 16, line 5).

Regarding claim 6, Raith discloses wherein the third authentication/ESN information is held in a device/network, that performs mutual authentication with the first device, and is provided from the device to the second device in authentication processing (col. 18, lines 49-55).

Regarding claim 7, Raith discloses a mutual authentication device authentication method (col. 18, lines 49-55) in which a first device/network, authenticates a second

device/mobile station, wherein the first device/network, holds first authentication information in a secure area/RAND, the second device that holds second authentication information/RESP generates fourth authentication/B-Key, information from the second authentication information/RESP, and third authentication information/RESPBIS, provided from outside of the second device, and the first device makes a decision on conformity between the first authentication information and the fourth authentication information to authenticate the second device (fig. 4, and col. 18 line 55- col. 19, line 20).

Regarding claim 8, Raith discloses a second device/mobile station, to be authenticated by a first device/network, comprising: a transmission/reception section that transmits and receives information to/from the first device; an information holding section that holds second authentication information/mobile identification number/MIN (col. 15, lines 64-65), (col. 7, line 64-col. 8, line 3 an information acquirer that acquires third authentication information/electronic serial number/ESN (col. 16, line 8), from outside of the second device/mobile station; and an authentication information generator which generates fourth authentication information/temporary encryption key (col. 16, lines 11-12), from the second authentication information/MIN, and the third authentication information/ESN, and outputs the fourth authentication information/key, to the first device/network, through the transmission/reception section, (col. 17, lines 17-20).

Regarding claim 9, Raith discloses wherein the transmission/reception section receives

random information/RAND from the first device, and the authentication information generator encrypts the random information/RAND, using the fourth authentication information to transmit to the first device through the transmission/reception section (col. 16, lines 2-5).

Regarding claim 10, Raith discloses wherein the transmission/reception section receives the random information from the first device, and the authentication information generator encrypts the fourth authentication information using the random information to transmit to the first device through the transmission/reception section (col. 16, lines 2-5).

Regarding claims 11-13, Raith discloses further comprising: an update control section that controls update of information required for processing for authentication, wherein after authentication from the first device succeeds, substituting for the second authentication information, the update control section stores in the information holding section the random information as new second authentication information, generates key information that is new authentication information from the third authentication information and the random information, and has the first device hold the key information through the transmission/reception section (col. 7, line 60 – col. 8, line 52).

Regarding claim 14, Raith discloses a first device that authenticates a second device, comprising: a transmission/reception section that transmits and receives information to/from the second device/mobile station, (col. 9, lines 48-50);

a first information holding section that holds first authentication information/changeable key input/RAND (col. 15, lines 59-60), in a secure area (col. 8, lines 6-7); and the decider/controller, makes a decision on conformity between the first authentication information/RAND, and the fourth authentication information/key, to authenticate the second device/mobile station (col. 16, lines 13-20).

Regarding claim 15, Raith discloses further comprising: a random information generator that generates random information to transmit to the second device through the transmission/reception section (col. 15, lines 57-62), wherein the decider decodes (fig. 3, #129, 130, 136) information received in the transmission/reception section using the first authentication information, and makes a decision on conformity between the decoded information and the random information (col. 16, lines 13-20).

Regarding claim 16, Raith discloses the first device according to claim 14, further comprising: a random information generator that generates random information to transmit to the second device through the transmission/reception section, (col. 15, lines 57-62), wherein the decider decodes (fig. 3, #129, 130, 136) information received in the transmission/reception section using the random information, and makes a decision on conformity between the decoded information and the first authentication information (col. 16, lines 13-20).

Regarding claims 17-19, Raith discloses wherein after authentication of the second

Art Unit: 2134

device succeeds, substituting for the first authentication information, the information holding section holds key information that is new authentication information received in the transmission/reception section, as new first authentication information (col. 7, line 60 – col. 8, line 52).

Regarding claim 20. A program for having a computer, which is integrated into a second device/mobile station, to be authenticated by a first device/network, execute the procedures of: generates fourth authentication information/temporary encryption key (col. 16, lines 11-12), from the second authentication information/MIN, that the second device holds, and the third authentication information/ESN, acquired from outside of the second device; requesting an issue of random information to the first device (col. 15, lines 57-65); and encrypting the random information received from the first device using the fourth authentication information to output to the first device (col. 16, lines 10-15).

Conclusion

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aubrey H. Berger whose telephone number is (571)272-8155. The examiner can normally be reached on Monday - Thursday, and alternate Friday's.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jacques Louis-Jacques can be reached on (571)272-6962. The fax phone

Art Unit: 2134

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AHB

Jacques A. Louis
JACQUES A. LOUIS
PRIMARY EXAMINER